

Claim List

1-25 (cancelled)

26. (new) A system for scanning tissue comprising:
a light source for producing an illumination beam;
optics for scanning and focusing said illumination beam into tissue and receiving returned illumination in which the illumination beam and returned illumination are cross polarized with respect to each other, wherein said returned illumination when imaged represents a section of said tissue.

27. (new) The system according to Claim 26 wherein said tissue is located in a solution which enhances brightness of one or more tissue structures in said returned illumination representing at least one section of said tissue.

28. (new) The system according to Claim 27 wherein said solution has an acid component.

29. (new) The system according to Claim 28 wherein said acid component is one of acetic acid or vinegar.

30. (new) The system according to Claim 26 further comprising a container with means for placing said tissue under tension against a surface through which said optics scans said tissue with said illumination beam.

31. (new) The system according to Claim 26 further comprising a detector which receives said returned illumination and forms an image representing said section of said tissue.

32. (new) The system according to Claim 26 wherein said optics are part of a confocal microscope.

33. (new) A system for providing enhanced images of tissue comprising:

means for optically forming an image representing a section of tissue utilizing light of different polarization in the illumination of the tissue and in the detection of light from the tissue; and

an image enhancing agent provided to said tissue to enhance tissue structures in said image.

34. (new) The system according to Claim 33 wherein said enhancement of said image is in accordance with said light of said different polarization in the illumination of tissue and detection of light from said tissue.

35. (new) The system according to Claim 33 wherein said image enhancing agent has an acid component.

36. (new) The system according to Claim 33 wherein said acid component is one of acetic acid or vinegar.

37. (new) A method for scanning tissue comprising the steps of:
generating an illumination beam;
scanning the beam to tissue;
receiving returned light from the tissue representing at least one section of the tissue;
controlling the polarization of the illumination beam and the returned light;
detecting the returned light to form an image of the section of the tissue; and
providing an agent to said tissue which enhances the brightness of one or more tissue structures in said image.

38. (new) The method according to Claim 37 wherein said agent has an acid component.

39. (new) The method according to Claim 38 wherein said acid component is one of acetic acid or vinegar.

40. (new) The method according to Claim 37 wherein said polarization controlling step further comprises the step of changing polarization state of at least one of the illumination beam and the returned light to effect characteristics of tissue structures in the image of the tissue section to enable determination of which of the tissue structures are cancerous.

41. (new) A method for detecting cancerous cells in images comprising the steps of:

washing the tissue to be imaged in a solution which will enhance brightness of nuclei in images;

illuminating the tissue with light of a first polarization;

collecting returned light from the tissue

detecting said collected returned light to form one or more images representing a section of the tissue; and

adjusting one or more of said first polarization and said second polarization to change the collected light scattered from the nuclei in said images.

42. (new) The method according to Claim 41 wherein said solution has an acid component.

43. (new) The method according to Claim 42 wherein said acid component is one of acetic acid or vinegar.